Wisconsin
Department of Commerce

Evaluation # 200248-I (Replaces 200204-I)

Safety & Buildings Division
201 West Washington Avenue
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Wisconsin
Building Products Evaluation

Material	Master-Bilt (MS) Foam Plastic Sandwich Panels
Manufacturer	Master-Bilt Products Highway 15 North New Albany, MS 38652

SCOPE OF EVALUATION

The cited **IBC** requirements below are in accordance with of the current **Wisconsin Amended ICC 2000 Code**:

- **Foam Plastic Core Material:** The Master-Bilt (MS) foam plastic sandwich panel was evaluated under the foam plastic requirements in accordance with **ss. IBC 2603.1**, **2603.2**, **2603.3** and **Exception 2**, **2603.5.2**, **2603.5.2** and **s. IBC 2603.7**.

- **Nonstructural Wall and Ceiling Panel:** The Master-Bilt (MS) foam plastic sandwich panel was evaluated as a nonstructural insulated wall and ceiling panel used in refrigerated facilities and freezer warehouses in accordance with **ss. IBC 2603.4.1.2**, **2603.4.1.3**, **2603.5.2** and **2603.7**.

The structural performance and thermal transmission properties of the panels are outside the scope of this evaluation and are subject to specific evaluation and approval by the building plan reviewer.

DESCRIPTION AND USE

Master-Bilt (MS) panels consist of a core of foamed polyurethane insulation faced with 24 or 26 gauge painted or unpainted galvanized steel, 20, 22, or 24 gauge stainless steel or .034-inch aluminum.

Mechanical through fastening of both panel facings to the building structure is required:
1. Maximum 4-inch thick panels using General Latex XR-1121 foam system and minimum 26 gauge galvanized steel facings; or

2. Maximum 6-inch thick panels using PP 442-22, PSI PH10-20, FE 221, IPI R-1405, or RICHPANEL 103-3100 foam systems and minimum 26 gauge galvanized steel or Galvalume facings.

TESTS AND RESULTS

ASTM E-84 tests on the unfaced, **4-inch** thick polyurethane core showed a flame spread rating of 25 and a smoke developed rating of 440.

Factory Mutual Research conducted their full-scale room corner test (FM 4880) on galvanized steel-faced panels for wall/ceiling with **6-inch** thick polyurethane cores. The wall/ceiling panels met the Factory Mutual Research requirements for a Class I fire rating and met code requirement for use without a thermal barrier and 30 foot height limitation. The test data is on file with the department.

ASTM D1929 test data for flash ignition and self-ignition temperatures: flash ignition 968º F (520º C) and self-ignition 968º F (520º C). The test data is on file with the department.

LIMITATIONS OF APPROVAL

The **IBC** limitations below are in accordance with of the current **Wisconsin Amended ICC 2000 Code**:

- **Nonstructural Wall and Ceiling Panel: Section IBC 2603.7** allows the use of the MS panel without a thermal barrier and automatic sprinkler system based on diversified tests up to a maximum height of 30 feet. The Master-Bilt (MS) panels are approved for use to a maximum height of 30 feet without a thermal barrier and without an automatic sprinkler system (for refrigerated facilities and freezer warehouses), required under **ss. IBC 2603.3** and **Exception 2.**, and **ss. IBC 2603.4.1.2**, **2603.4.1.3** and **2603.5.2**.

NOTES:
1. For refrigerated buildings only, building heights exceeding 30 feet, and panels up to 10 inches thick maximum, thermal barriers on both sides of the panel shall be required for proper protection.
2. Other sections of the code may require an automatic sprinkler system based on limitations of occupancy, area, height, etc., or may specify stricter height limitations.

Installation shall be in accordance with the Factory Mutual Research listings, the manufacturer's instructions and this evaluation. In the event of conflicts, the more strict requirements shall govern.

This approval will be valid through December 31, 2007, unless manufacturing modifications are made to the product or a re-examination is deemed necessary by the department. The Wisconsin Building Product Evaluation number must be provided when plans that include this product are submitted for review.

DISCLAIMER

The department is in no way endorsing or advertising this product. This approval addresses only the specified applications for the product and does not waive any code requirement not specified in this document.

Revision Date: October 29, 2002

Approval Date: January 31, 2002 By: _____

Lee E. Finley, Jr.
Product & Material Review
Integrated Services Bureau

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